Pub May 1, 1989 Patent 3667 Appl 7720934 filed Sept 29 1976

"THREE-SHAFTED MULTIFUNCTIONAL CLEANING DEVICE"

ABSTRACT

A three-shafted multifunctional cleaning device, mainly three rotating shafts which are geared by a gear set of gearwheels of several different diameters and driven by a drive motor, so as to allow said three rotating shafts to run at different rotation speeds respectively; wherein said three rotating shafts being structurally solid or hollow columns of different diameters to respectively serve as fixtures for the comb head, waxing head, or exhaust fan blades that contains connecting sticks of corresponding diameter to be fixed and connected, for the purpose of performing the functions of scrubbing, waxing and polishing, or vacuum cleaning, respectively. Additionally, the said rotating shift designated for fixing and placing the comb head has a water outlet placed at its center, and the said water outlet being mapped with the outlet of the water supply pipe, wherein the other end of said water supply pipe being extended to the water supply inlet placed at the end of the handle of the present device to allow the rinsing water to enter from the water supply inlet and squirt out from the comb head, for the purpose of facilitating the rinsing process. Furthermore, in case when the exhaust fan blades are in use, the exhaust fan blades further allowing the addition of an outer cap that contains an extended nozzle on the outside to ensure the effectiveness of vacuum cleaning.

Case No. 65160 (77209034)

THREE-SHAFTED MULTIFUNCTIONAL CLEANING DEVICE

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates to a three-shafted multifunctional cleaning device, particularly a multifunctional cleaning device that simultaneously contains three rotating shafts of different diameters and rotation speeds, so as to allow said three rotating shafts to be installed with comb head, waxing head or exhaust fan blades, respectively, for the purpose of performing the functions of scrubbing, waxing and polishing, or vacuum cleaning, respectively.

2. Description of Prior Art

The electric portable cleaning device of the prior art mostly contains only one rotating shaft to install the comb head or waxing head for the purpose of separately performing the jobs of scrubbing, or waxing and polishing. With only one rotating shaft providing only one rotation speed, the cleaning device of the prior art may be structurally simple overall, but it cannot achieve the functions of scrubbing and waxing/polishing at the same time because normal scrubbing job requires larger extent of torque in order to withstand the downward thrust of the comb head for the scrubbing, and hence, the rotation speed needed for this application is not supposed to be too fast; whereas in the application for waxing and polishing, the rotation speed needs to be relatively faster, so as to perform the waxing and

polishing jobs smoothly. Although there is a cleaning device available on the market that has a mechanism allowing rotation speed change through the adjustment of a switch, when the gears are forced to change rotation speed while running at high speed, they are easily worn out or even broken off after repeated operation of such practice because the gears commonly seen are rather weak (particularly those made out of plastics). Therefore, that kind of mechanism is not ideal for general manufacturers or end-users.

Additionally, because the electric cleaning device of the prior art does not allow the addition of vacuum cleaning device, it additionally requires the use of a vacuum cleaner when vacuum cleaning is needed. This causes quite some inconvenience in using the device since it requires several items of cleaning units.

In viewing the drawbacks of the devices of the prior art, the inventor of the present invention has invented this three-shafted multifunctional cleaning device, with years of working experiences and intensive research in the field of development.

SUMMARY OF THE INVENTION

The main object of the present invention is to provide a three-shafted multifunctional cleaning device, so that, by means of the different diameters and rotation speeds of the three rotating shafts, the rotating shafts can activate the comb head, waxing head or exhaust fan blades to operate individually in order to accomplish the functions of scrubbing, waxing and polishing, or vacuum cleaning.

The secondary object of the present invention is to provide a three-shafted multifunctional cleaning device, so that, by means of different diameters and

rotation speeds of the three rotating shafts, the rotating shafts can respectively serve as fixtures for the comb head, waxing head, or exhaust fan blades that contains connecting sticks of corresponding diameter to be fixed and connected, thus not only avoiding mistakes of misplacing parts, but also ensuring the smooth and appropriate operation of scrubbing, waxing and polishing, or vacuum cleaning, respectively.

BRIEF DESCRIPTION OF THE DRAWING

Figure 1 illustrates the 3-D structural decomposition schema of the present invention.

Figure 1A illustrates the diagram on the gear drive of the present driving mechanism.

Figure 2 illustrates the 3-D structural composition schema of the present invention.

Figure 3 illustrates the diagram on the structural schema of the comb head of the present invention.

Figure 4 illustrates the diagram on the structural schema of the waxing head of the present invention.

Figure 5 illustrates the diagram on the structural schema of the exhaust fan blade and the vacuuming outer cap of the present invention.

DETAILED DESCRIPTION OF THE INVENTION

To further describe the structure of the present invention as well as its features,

the following details will be stated in collocation with the drawings as shown below.

Figure 1 illustrates the 3-D structural decomposition schema of the present invention, which mainly comprises a body cover 1, a driving mechanism 2, a body base 3 and a handle 4, wherein said base 3 has a water flow outlet 5 placed at a proper location; said outlet 5 having a water supply pipe placed at one end, while enabling the other end of said water supply pipe 6 to extend to the water supply inlet 7 placed at the end of the handle 4; said water supply inlet 7 being fixed to the water pipe so as to allow water flow to enter from said water supply inlet 7 and squirt out from said outlet 5. The said driving mechanism 2 is mainly a drive motor driving the turning of the rotating shaft 9 of a slightly thinner hexagonal column, then, by means of a co-axial gear 10 placed at a proper location at the bottom of said rotating shaft 9, driving the rotation of another drive gear 11 that is geared to said gear 10, and further driving another round rotating shaft 12 that is larger than the rotating shaft 9 with a slightly slower rotation, said round rotating shaft 12 having a hexagonal column fillister 13 placed at the center of said round rotating shaft 12; whereas said rotating shaft 12, by means of the gearing of the gears of different diameters, further driving another even larger round rotating shaft 14 with an even slower rotation; wherein said rotating shaft 14, apart from having a hexagonal column fillister 15 placed at the center of said rotating shaft 14, also has a connecting pipe 16 placed right at its center, the said connecting pipe 16 being hollow and placed vertically, and its bottom being mapped and closely connected with the water flow outlet 5 of the base 3 to allow the water flow squirting from said outlet 5 to further squirt out from the upper end of said connecting pipe 16; wherein said three rotating shafts 9, 12, and 14 have O-rings 17, 18, and 19 placed

at proper locations respectively, for the purpose of ensuring air tight sealing. Figure 1A illustrates the diagram on the gear drive of the present driving mechanism 2.

The said cover 1 has a power supply plug 20 placed at a proper location, said power supply plug 20 linking to the drive motor 8 through two power lines, and serving as the input of power supply; wherein said cover 1 having three through holes 21, 22 and 23 placed on the upper end at proper locations correspond to the three rotating shafts 9, 12 and 14 respectively, so that, after said drive mechanism 2 has been fastened onto the bottom of said cover 1, said rotating shafts 9, 12 and 14 can be placed into said through holes 21, 22 and 23, respectively. Furthermore, because of said three rotating shafts 9, 12, and 14 having O-rings 17, 18, and 19 placed at proper locations respectively, the water flow outside can be completely kept away from its interior after the cover 1 that contains said drive mechanism 2 has been fastened with the base 3. Figure 2 illustrates the 3-D structural composition schema of the present invention. As shown in this diagram, there is a screw fixing hole 24 made with appropriate depth placed respectively at each of the four corners on the outside of the cover 1.

The rotating shaft 9 has the fastest rotation speed of all three rotating shafts of the present invention, with the rotating shaft 12 following next, and the rotating shaft 14 having the slowest rotation speed. Said rotating shaft 14 is designated to serve as the rotating shaft for installing the comb head 25 for the purpose of obtaining the largest extent of torque from the slowest rotation speed, so as to facilitate the performance of scrubbing; whereas the said rotating shaft 9 with the fastest rotation speed is designated to serve as the rotating shaft for installing the exhaust fan blades 26, for the purpose of obtaining the fastest rotation speed to

drive said exhaust fan blades 26 so as to facilitate the performance of vacuum cleaning; whereas the rotating shaft 12 with the medium rotation speed is designated to serve as the rotating shaft for fixing the waxing head 27, so as to facilitate the performance of waxing and polishing. Figure 3, Figure 4, and Figure 5 illustrate the structural schema of the comb head 25, waxing head 27, and the exhaust fan blade 26 of the present invention respectively. As shown in these diagrams, there are connecting sticks 28, 29, and 30, having the same and corresponding diameters and shapes to those of the rotating shafts 14, 12, and 9 respectively, to be placed on the comb head 25, waxing head 27, and the exhaust fan blade 26 respectively, to allow the connecting sticks 28, 29 and 30 to be respectively inserted and fixed onto the corresponding said rotating shafts 14, 12, and 9 so as to avoid mistakes of misplacing parts, while ensuring the smooth and appropriate operation of scrubbing, waxing and polishing, or vacuum cleaning, respectively.

Additionally, since the connecting stick 28 of said comb head 25 is hollow in its structure, the connecting pipe 16 at the center of the rotating shaft 14 extends from there to allow the water squirting from the connecting pipe 16 to flow right into the area around said comb head 25, thus achieving and enabling the process of scrubbing.

Furthermore, after the exhaust fan blades 26 have been placed on the rotating shaft 9, an outer cap 32 that contains a extended nozzle 31 can further be placed over them, and since said outer cap 32 has fixing raised lumps 33 placed at locations corresponding to the locations of the fastener fixing holes 24, after these said fixing raised lumps 33 have been fixed in said corresponding screw fixing holes 24, it can be fixed on the outside of the body cover 1 of the present invention.

Additionally, since said outer cap 32 has a body mesh 34 of appropriate size placed at the inner side of the extended nozzle 31, while said outer cap 32 has several rows of venting holes 35 placed at the other side opposite to the extended nozzle 31, when the exhaust fan blades 26 draw air in from the extended nozzle 31 and let air out from the venting holes 35, they bring along dust that is gathered into the body mesh 34, thus achieving the function of vacuum cleaning.

In conclusion, since the present invention uses a drive motor to drive three rotating shafts of different diameters and rotation speeds, it allows comb head, waxing head, and exhaust fan blades to be placed on specific rotating shafts respectively, depending on different rotation speeds, to achieve the purpose of smooth performance of the functions of scrubbing, waxing and polishing, or vacuum cleaning, respectively. Therefore, the applicability of the present invention is very extensive. Additionally, seeing that the cleaning devices currently available on the market do not show any similar or equivalent mechanisms to those of the present invention, it is beyond question that the present invention bears the quality of originality with advancement, and therefore, the present invention certainly meets the criteria of being a new invention having "originality with advancement, as well as practicability". The inventor hereby would like to have this application duly set forth, sincerely hoping to beseech the recognition of your honorable reviewers for granting the legitimate right of patent at your earliest convenience.

CLAIMS

1. A three-shafted multifunctional cleaning device, mainly comprising a body base, a driving mechanism, a body cover and a handle, wherein said handle being connected to the base at a proper location, said handle having a water supply inlet placed at the end, said water supply inlet having a water supply pipe placed on the inner side leading directly to the water flow outlet placed at a proper location of the base; said drive mechanism being fastened inside the cover at a proper location, mainly comprising a drive motor and three rotating shafts to place said three rotating shafts in the corresponding through holes placed on the cover, respectively; finally, said cover being fastened onto said base, thus forming the three-shafted multifunctional cleaning device of the present invention, featuring the following: said three rotating shafts being geared by a gear set of gearwheels of several different diameters in order to allow said three rotating shafts to run at different rotation speeds respectively, wherein said three rotating shafts being structurally solid or hollow columns of different diameters to cope with the corresponding connecting sticks placed for the comb head, waxing head, or exhaust fan blades, allowing said comb head, waxing head, or exhaust fan blades to be placed on the corresponding rotating shafts respectively, for the purpose of processing scrubbing, waxing and polishing, or vacuum cleaning smoothly.
2. A three-shafted multifunctional cleaning device as claimed in Claim 1, wherein the rotating shaft designated for exhaust fan blades has the fastest rotation speed of all three rotating shafts, with the rotating shaft designated

as a fixture for waxing head following next, and the rotating shaft designated for comb head having the slowest rotating speed.

3. A three-shafted multifunctional cleaning device as claimed in Claim 1 or Claim 2, wherein said rotating shaft designated as the fixture for the comb head has a connecting pipe placed at its center, and the bottom end of said connecting pipe being closely connected to the upper end of the above-mentioned water flow outlet, to guide the water flow squirting outwards to facilitate the process of scrubbing.

4. A three-shafted multifunctional cleaning device as claimed in Claim 1, which requires not only said exhaust fan blades to be placed on the corresponding rotating shaft, but also an outer cap that contains an extended nozzle to be attached on the outside of the rotating shaft, when vacuum cleaning is needed, to guide the direction of the vacuuming draft, and to accomplish smooth process of vacuum cleaning effectively.

5. A three-shafted multifunctional cleaning device as claimed in Claim 4, wherein said outer cap being placed not only with an extended nozzle at the front end, but also with several rows of venting holes at the back end, and said extended nozzle having a body mesh of appropriate size placed at the inside towards the end, so that when the flow of air is drawn in from said extended nozzle and let out from said venting holes, dust can be attached onto the body mesh, thus achieving the function of vacuum cleaning; additionally, said outer cap having fixed raised lumps placed at four corners at the bottom side to allow them to be placed in the screw fixing holes placed on the outside of the cover of the present invention, so as to ensure secured fastening.

Enclosure I

中華民國專利公報 〔19〕〔12〕
〔11〕公告編號：112667
〔44〕中華民國78年（1989）05月01日
新型

第 89114522 號
(訴願)引証附件 一

〔51〕Int·Cl·: A47L

全 3 頁

〔54〕名稱：三軸式多功能清潔裝置

〔21〕申請案號：77209034 〔22〕申請日期：中華民國77年（1988）09月20日

〔72〕創作人：巫東和 彰化縣埔鹽鄉彰水路二段一四一號
〔71〕申請人：巫東和 彰化縣埔鹽鄉彰水路二段一四一號
〔74〕代理人：陳正益 先生

1

〔57〕申請專利範圍：

1.一種三軸式多功能清潔裝置，其主要係由一座體、一傳動機構、一蓋體及一把柄所構成，其中該把柄乃樞接於座體之適當處，且該把柄之尾端係設有一進水口，該進水口之內端並設有一進水管直通至該座體適當處所設之水流出口處；而該傳動機構則係鎖設於蓋體之內適當處，其主要係由一驅動馬達及三轉動軸所組成，且使該三轉動軸係分別套置於該蓋體所設之對應貫穿孔中；最後，再將該蓋體鎖固於該座體上，即形成本創作之三軸式多功能清潔裝置，其特徵為：該三轉動軸乃係齒數大小不等之齒輪組嚙合連動，俾使該三轉動軸可分別呈不同速率之旋轉運動，並使該三轉動軸呈直徑各不相同之實心或空心桿體狀構造，俾配合毛刷頭、打蠟頭或抽風葉片所設之對應連結桿，以使該毛刷頭、打蠟頭或抽風葉片可分別供套置於其對應之轉動軸上，進而達到順利進行刷洗、打蠟曬光或吸塵之功效。

2.一種如申請專利第一項所述之三軸式多功能清潔裝置，其中該三轉動軸之旋轉速率，係以供抽風葉片固定之轉動軸為最快，而供打蠟頭固定之轉動軸則次之，至於供毛刷頭固定之轉動軸轉速則為最慢者。

2

3.一種如申請專利第一項或第二項所述之三軸式多功能清潔裝置，其中該供毛刷頭固定之轉動軸中央處係設有一連通管道，且該連通管道之底端係與上述之水流出口頂端密接，俾引導水流向外噴出，以輔助刷洗工作之進行。

4.一種如申請專利第一項所述之三軸式多功能清潔裝置，當其欲進行吸塵工作時，除了須將該抽風葉片套置於其對應之轉動軸上外，其外側尚必須套設一具有延伸吸嘴之外蓋，俾導引抽風之方向，進而達到順利吸塵之功效。

5.一種如申請專利第四項所述之三軸式多功能清潔裝置，其中該外蓋之前端除了設有一延伸嘴外，其後端並設有數排氣孔，且該延伸吸嘴之內側端部處並設有一適當大小之網體，俾使氣流由該延伸吸嘴吸入，且經由該排氣孔排出時，可進一步使灰塵附著於該網體上，以達到吸塵之目的；另該外蓋之底端四角隅處，並分別有固定凸塊，俾供套置於本裝置蓋體外側所設之對應螺釘固定孔中，以達到鎖固之目的。

圖示簡單說明：

第一圖：係本創作三軸式功能清潔裝置之立體構造分解圖。

Enclosure I

中華民國專利公報 〔19〕〔12〕
〔11〕公告編號：112067
〔44〕中華民國78年（1989）05月01日
新型

第 89114522 號
(訴願)引証附件一

〔51〕Int.Cl.：A47L

全 3 頁

〔54〕名稱：三軸式多功能清潔裝置

〔21〕申請案號：77209034 〔22〕申請日期：中華民國77年（1988）09月20日

〔72〕創作人：巫東和 彰化縣埔鹽鄉彰水路二段一四一號
〔71〕申請人：巫東和 彰化縣埔鹽鄉彰水路二段一四一號
〔74〕代理人：陳正益 先生

1

〔57〕申請專利範圍：

1.一種三軸式多功能清潔裝置，其主要係由一座體、一傳動機構、一蓋體及一把柄所構成，其中該把柄乃樞接於座體之適當處，且該把柄之尾端係設有一進水口，該進水口之內端並設有一進水管直通至該座體適當處所設之水流出口處；而該傳動機構則係鎖設於蓋體之內適當處，其主要係由一馬達及三轉動軸所組成，且使該三轉動軸係分別套置於該蓋體所設之對應貫穿孔中；最後，再將該蓋體鎖固於該座體上，即形成本創作之三軸式多功能清潔裝置，其特徵為：該三轉動軸乃係齒數大小不等之齒輪組嚙合連動，俾使該三轉動軸可分別呈不同速率之旋轉運動，並使該三轉動軸呈直徑各不相同之實心或空心桿體狀構造，俾配合毛刷頭、打蠟頭或抽風葉片所設之對應連結桿，以使該毛刷頭、打蠟頭或抽風葉片可分別供套置於其對應之轉動軸上，進而達到順利進行刷洗、打蠟膠光或吸塵之功效。

2.一種如申請專利第一項所述之三軸式多功能清潔裝置，其中該三轉動軸之旋轉速率，係以供抽風葉片固定之轉動軸為最快，而供打蠟頭固定之轉動軸則次之，至於供毛刷頭固定之轉動軸轉速則為最慢者。

2

3.一種如申請專利第一項或第二項所述之三軸式多功能清潔裝置，其中該供毛刷頭固定之轉動軸中央處係設有一連通管道，且該連通管道之底端係與上述之水流出口頂端密接，俾引導水流向外噴出，以輔助刷洗工作之進行。

4.一種如申請專利第一項所述之三軸式多功能清潔裝置，當其欲進行吸塵工作時，除了須將該抽風葉片套置於其對應之轉動軸上外，其外側尚必須套設一具有延伸吸嘴之外蓋，俾導引抽風之方向，進而達到順利吸塵之功效。

5.一種如申請專利第四項所述之三軸式多功能清潔裝置，其中該外蓋之前端除了設有一延伸嘴外，其後端並設有數排氣孔，且該延伸吸嘴之內側端部處並設有一適當大小之網體，俾使氣流由該延伸吸嘴吸入，且經由該排氣孔排出時，可進一步使灰塵附著於該網體上，以達到吸塵之目的；另該外蓋之底端四角隅處，並分別有固定凸塊，俾供套置於本裝置蓋體外側所設之對應螺釘固定孔中，以達到鎖固之目的。

圖示簡單說明：

第一圖：係本創作三軸式功能清潔裝置之立體構造分解圖。

3

第一A圖：係本創作傳動機構之傳動示意圖。

第二圖：係本創作之立體構造組合圖。

第三圖：係本創作所使用毛刷頭之構造圖。

4

第四圖：係本創作所使用打蠟頭之構造圖。

第五圖：係本創作所使用抽風葉片及吸塵外蓋之構造圖。

5.

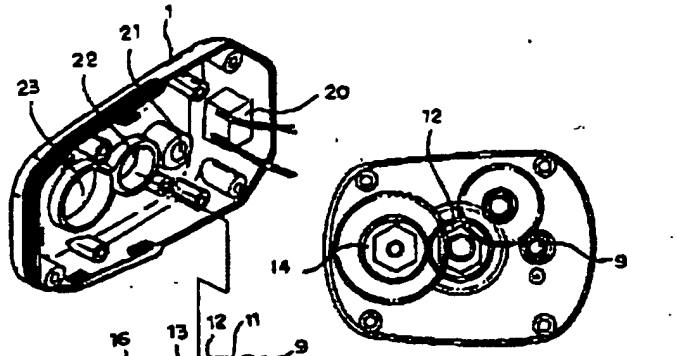


FIG. 1A

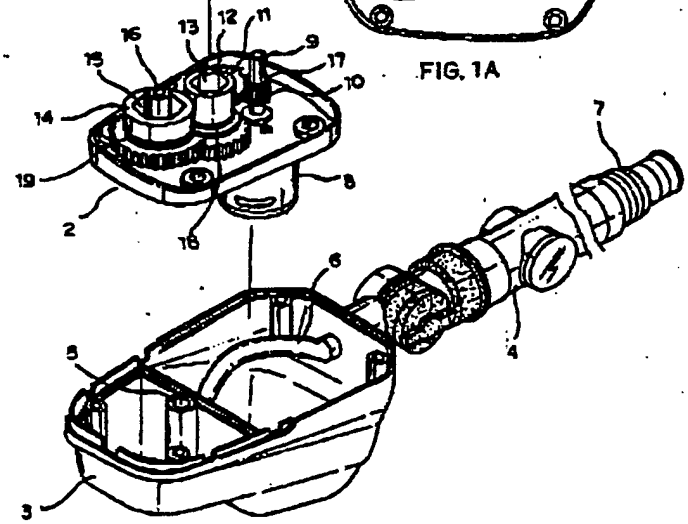


FIG. 1

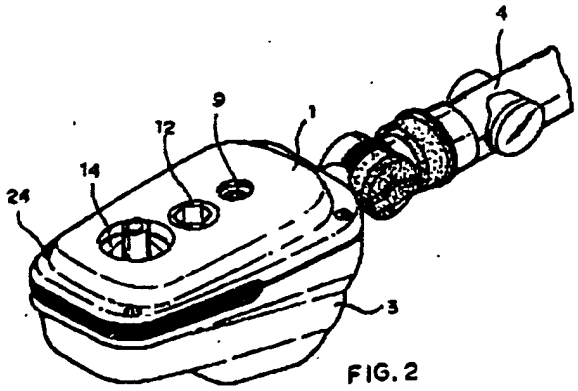


FIG. 2

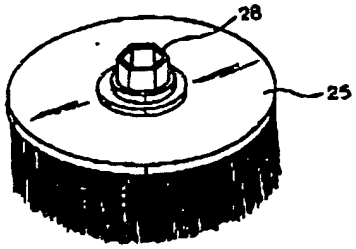


FIG. 3

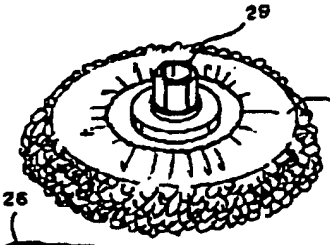


FIG. 4

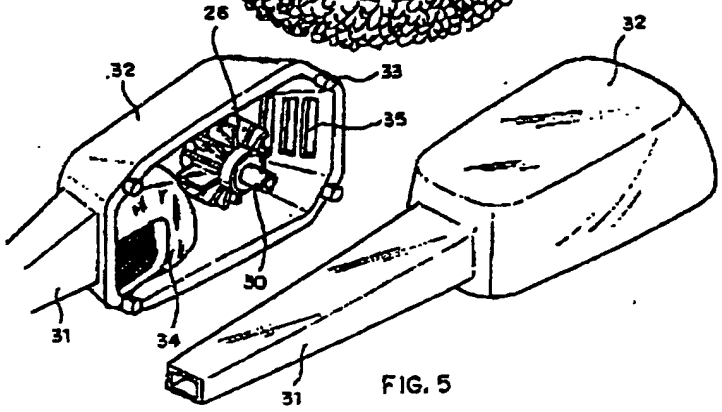


FIG. 5

Enclosure I

中華民國專利公報 〔19〕〔12〕
〔11〕公告編號：112667
〔44〕中華民國78年（1989）05月01日

第 89114522 號 (訴願)引証附件 一

新型

〔51〕Int.Cl.：A47L

全 3 頁

〔54〕名稱：三軸式多功能清潔裝置

〔21〕申請案號：77209034 〔22〕申請日期：中華民國77年（1988）09月20日

〔72〕創作人：巫東和 彰化縣埔鹽鄉彰水路二段一四一號
〔71〕申請人：巫東和 彰化縣埔鹽鄉彰水路二段一四一號
〔74〕代理人：陳正益 先生

1

〔57〕申請專利範圍：

1.一種三軸式多功能清潔裝置，其主要係由一座體、一傳動機構、一蓋體及一把柄所構成，其中該把柄乃樞接於座體之適當處，且該把柄之尾端係設有一進水口，該進水口之內端並設有一連水管直通至該座體適當處所設之水流出口處；而該傳動機構則係組設於蓋體之內適當處，其主要係由一驅動馬達及三轉動軸所組成，且使該三轉動軸係分別套置於該蓋體所設之對應貫穿孔中；最後，再將該蓋體鎖固於該座體上，即形成本創作之三軸式多功能清潔裝置，其特徵為：該三轉動軸乃係齒數大小不等之齒輪組嚙合連動，俾使該三轉動軸可分別呈不同速率之旋轉運動，並使該三轉動軸呈直徑各不相同之實心或空心桿體狀構造，俾配合毛刷頭、打蠟頭或抽風葉片所設之對應連結桿，以使該毛刷頭、打蠟頭或抽風葉片可分別供套置於其對應之轉動軸上，進而達到順利進行刷洗、打蠟膠光或吸塵之功效。

2.一種如申請專利第一項所述之三軸式多功能清潔裝置，其中該三轉動軸之旋轉速率，係以供抽風葉片固定之轉動軸為最快，而供打蠟頭固定之轉動軸則次之，至於供毛刷頭固定之轉動軸轉速則為最慢者。

2

3.一種如申請專利第一項或第二項所述之三軸式多功能清潔裝置，其中該供毛刷頭固定之轉動軸中央處係設有一連通管道，且該連通管道之底端係與上述之水流出口頂端密接，俾引導水流向外噴出，以輔助刷洗工作之進行。

4.一種如申請專利第一項所述之三軸式多功能清潔裝置，當其欲進行吸塵工作時，除了須將該抽風葉片套置於其對應之轉動軸上外，其外側尚必須套設一具有延伸吸嘴之外蓋，俾導引抽風之方向，進而達到順利吸塵之功效。

5.一種如申請專利第四項所述之三軸式多功能清潔裝置，其中該外蓋之前端除了設有一延伸嘴外，其後端並設有數排氣孔，且該延伸吸嘴之內側端部處並設有一適當大小之網體，俾使氣流由該延伸吸嘴吸入，且經由該排氣孔排出時，可進一步使灰塵附著於該網體上，以達到吸塵之目的；另該外蓋之底端四角隅處，並分別有固定凸塊，俾供套置於本裝置蓋體外側所設之對應螺釘固定孔中，以達到鎖固之目的。

圖示簡單說明：

第一圖：係本創作三軸式功能清潔裝置之立體構造分解圖。

Enclosure I

中華民國專利公報 〔19〕〔12〕
〔11〕公告編號：112667
〔44〕中華民國78年（1989）05月01日
新型

第 89114522 號
(訴願)引証附件一

〔51〕Int·Cl·：A47L

全 3 頁

〔54〕名稱：三軸式多功能清潔裝置

〔21〕申請案號：77209034 〔22〕申請日期：中華民國77年（1988）09月20日

〔72〕創作人：巫東和 彰化縣埔鹽鄉彰水路二段一四一號
〔71〕申請人：巫東和 彰化縣埔鹽鄉彰水路二段一四一號
〔74〕代理人：陳正益 先生

1

〔57〕申請專利範圍：

1.一種三軸式多功能清潔裝置，其主要係由一座體、一傳動機構、一蓋體及一把柄所構成，其中該把柄乃銜接於座體之適當處，且該把柄之尾端係設有一進水口，該進水口之內端並設有一連水管直通至該座體適當處所設之水流出口處；而該傳動機構則係裝設於蓋體之內適當處，其主要係由一馬達馬達及三轉動軸所組成，且使該三轉動軸係分別套置於該蓋體所設之對應貫穿孔中；最後，再將該蓋體鎖固於該座體上，即形成本創作之三軸式多功能清潔裝置，其特徵為：該三轉動軸乃係採取大小不等之齒輪組嚙合連動，俾使該三轉動軸可分別呈不同速率之旋轉運動，並使該三轉動軸呈直徑各不相同之實心或空心桿體狀構造，俾配合毛刷頭、打蠟頭或抽風葉片所設之對應連結桿，以使該毛刷頭、打蠟頭或抽風葉片可分別供套置於其對應之轉動軸上，進而達到順利進行刷洗、打蠟曝光或吸塵之功效。

2.一種如申請專利第一項所述之三軸式多功能清潔裝置，其中該三轉動軸之旋轉速率，係以供抽風葉片固定之轉　軸為最快，而供打蠟頭固定之轉動軸則次之，至於供毛刷頭固定之轉動軸轉速則為最慢者。

2

3.一種如申請專利第一項或第二項所述之三軸式多功能清潔裝置，其中該供毛刷頭固定之轉動軸中央處係設有一連通管道，且該連通管道之底端係與上述之水流出口頂端密接，俾引導水流向外噴出，以輔助刷洗工作之進行。

4.一種如申請專利第一項所述之三軸式多功能清潔裝置，當其欲進行吸塵工作時，除了須將該抽風葉片套置於其對應之轉動軸上外，其外側尚必須套設一具有延伸吸嘴之外蓋，俾導引抽風之方向，進而達到順利吸塵之功效。

5.一種如申請專利第四項所述之三軸式多功能清潔裝置，其中該外蓋之前端除了設有一延伸嘴外，其後端並設有數排氣孔，且該延伸吸嘴之內側端部處並設有一適當大小之網體，俾使氣流由該延伸吸嘴吸入，且經由該排氣孔排出時，可進一步使灰塵附著於該網體上，以達到吸塵之目的；另該外蓋之底端四角隅處，並分別有固定凸塊，俾供套置於本裝置蓋體外側所設之對應螺釘固定孔中，以達到鎖固之目的。

圖示簡單說明：

第一圖：係本創作三軸式功能清潔裝置之立體構造分解圖。

3

第一A圖：係本創作傳動機構之傳動示意圖。

第二圖：係本創作之立體構造組合圖。

第三圖：係本創作所使用毛刷頭之構造圖。

4

第四圖：係本創作所使用打蠟頭之構造圖。

第五圖：係本創作所使用抽風葉片及吸塵外蓋之構造圖。

5.

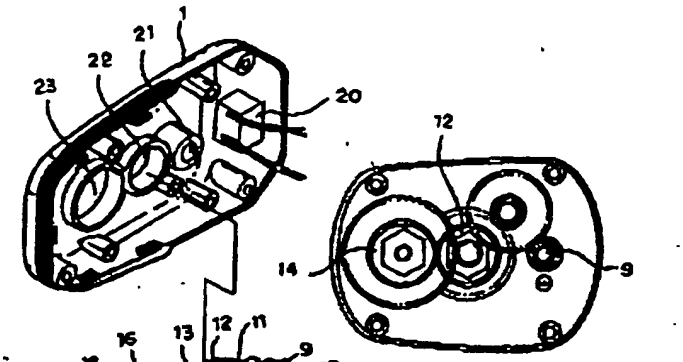


FIG. 1A

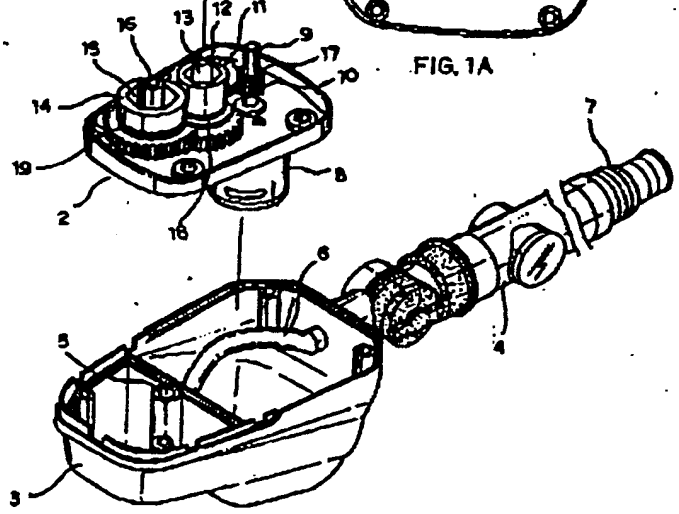


FIG. 1

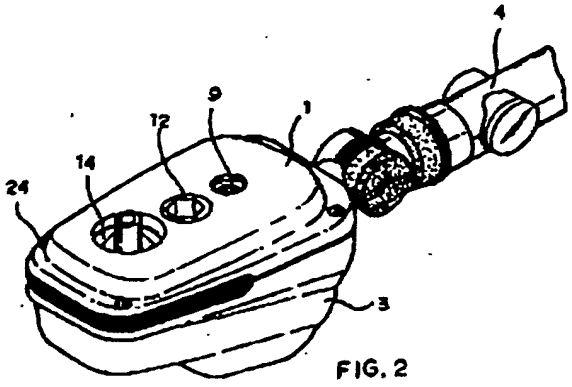


FIG. 2

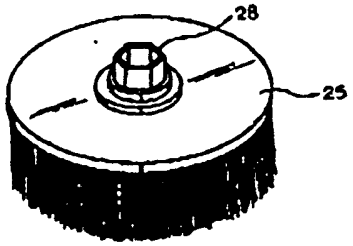


FIG. 3

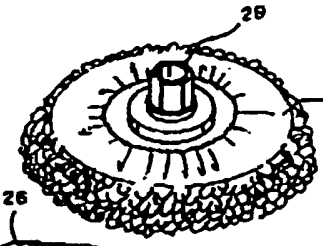


FIG. 4

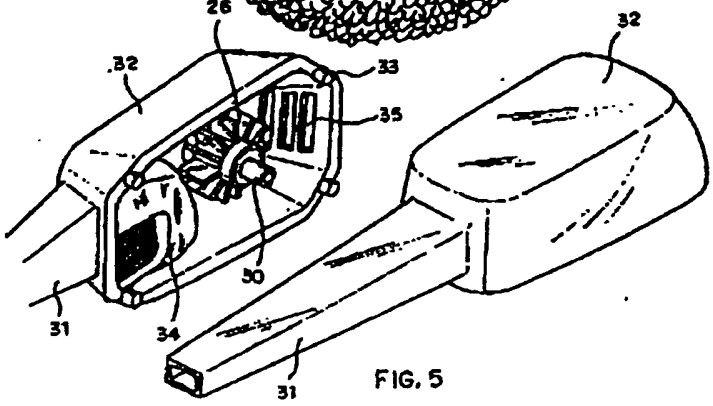
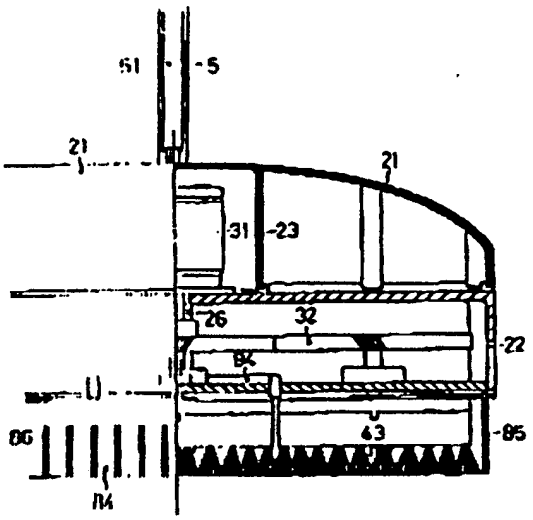


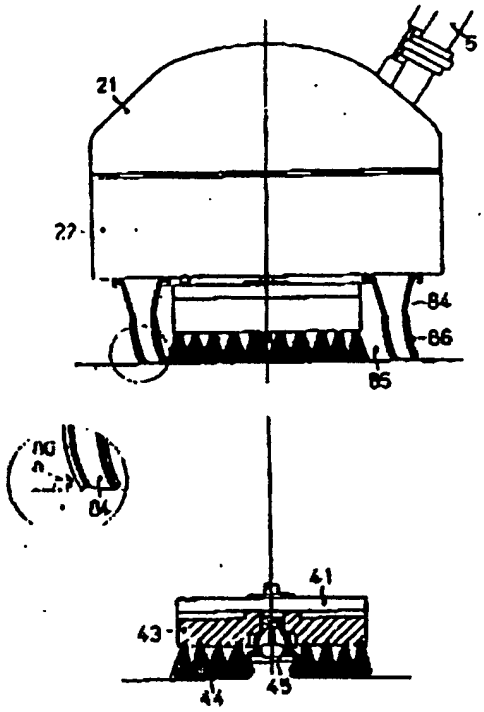
FIG. 5



第 3 圖

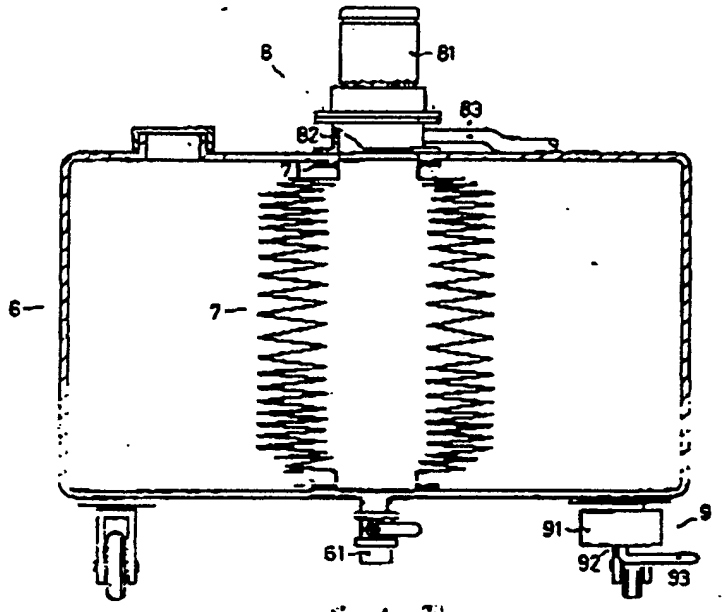
Fig. 3

taken along Line A-A of Fig. 2



第 5 圖 Fig. 5

Showing the State of Use



第 4 圖

Fig. 4 : Cross-Sectional View of the Clean Water Container